All dollar amounts in thousands

Activity: Line Item Construction and Maintenance

Activity Summary

Program Component	2003 Actual	2004 Estimate	2005 Uncontr/ Related Changes	2005 Program Changes (+/-)	2005 Budget Request	Change From 2004 (+/-)
Line Item Construction and Maintenance	214,194	214,295		-112	214,183	-112
Total Requirements	**214,194**	**214,295**		**-112**	**214,183**	**-112**

Authorization

16 U.S.C. 1 The National Park Service Organic Act
Public Law 105-178 The Transportation Equity Act for the 21st Century (TEA-21)

DOI Outcome Goals Applicable to Construction Activities

Resource Protection

1.1 Improve Health of Watersheds, Landscapes, and Marine Resources

Activities and Programs in the Construction Appropriation support this goal by providing General Management Planning and construction pre-design to identify park resource protection and visitor use needs and to identify site conditions prior to construction. Examples include construction site analysis of archeological resources and geologic engineering evaluations. General Management Plans provide and maintain up-to-date plans for the protection, use, development, and management of parks.

1.2 Sustain Biological Communities

Activities and Programs in the Construction Appropriation support this goal by providing planning for the protection of biological communities prior to and during construction. General Management Plans provide and maintain up-to-date plans for the protection of each park unit.

1.3 Protect Cultural and Natural Heritage Resources

Activities and Programs in the Construction Appropriation support this goal by providing construction and maintenance for the preservation and rehabilitation of historic and archeological structures.

Recreation

3.1 Provide for a Quality Recreation Experience, including access and enjoyment of natural and cultural resources

Activities and Programs in the Construction Appropriation support this goal by providing safe structures and provide for safe and sanitary water and sewer systems.

Serving Communities

4.1 Protect Lives, Resources and Property

Activities and Programs in the Construction Appropriation support this goal by providing safe structures, roadways, pathways, campground and other visitor and employee use.

Activity Overview

This activity provides for the construction, rehabilitation, and replacement of those facilities needed to accomplish the management objectives approved for each park.

Fiscal Year 2005 Program Overview

Based on the latest physical inventory data available, the National Park System contains approximately 16,000 administrative and public use buildings, 5,771 historic buildings, 4,246 housing units (approximately 1,000 of which are classified as historic), 5,455 miles of paved roads, 6,445 miles of unpaved roads, approximately 17,000 miles of paved and unpaved trails, 1,100 campgrounds, 1,803 bridges and tunnels, 1,228 water systems, 1,459 wastewater systems, 362 electrical systems,

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approximately 160,000 signs, 8,505 monuments, 300 radio systems, 517 water impoundment structures, more than 200 solid waste operations, and many other special features. Without the construction activity, access to park areas, the preservation and rehabilitation of historic and archeological structures, the construction of park recreation and operational facilities–such as museums and other interpretive structures, and the provisions of safe and sanitary water and sewer systems, would be impossible. Projects are also programmed to protect the existing Federal investment in such facilities through reconstruction and rehabilitation projects and to restore lands to natural conditions through the removal of outdated/no-longer-needed facilities.

Facility Condition Index: Line Item Construction prioritization is an evolving process. Currently the National Park Service (NPS) uses a two tier priority system to maximize its construction investments. The first tier of evaluation factors assesses improvements related to health and safety, resource protection, maintenance needs, and visitor services. Projects demonstrating high priorities in the first tier are then ranked using Choosing-By-Advantage methodology to evaluate the relative benefits provided by individual projects. The NPS has recently completed condition assessments for most of its facilities, and established a Facility Condition Index (FCI) for each asset. [The Facility Condition Index quantifies the condition of a structure by dividing the estimated amount needed to correct its deferred maintenance backlog by its current estimated replacement value.] To ensure that its capital asset investments are made as efficiently as possible, the NPS will begin incorporating FCI analysis into the prioritization process by comparing the existing FCI of a facility against the proposed FCI after the construction investment. Based on this output, the NPS will then be able to benchmark improvements on individual assets, and measure improvements at the individual asset level, park level, and national level. A list of proposed FY 2005 line construction projects demonstrating the effects of applying the FCI follows below.

PARK, PROJECT	PROJECT NUMBER	ESTIMATE 000'S	CURRENT FCI	POST-CONSTR. FCI
Boston NHP, Rehabilitate Building 5	016285	2,963	0.15	0.01
Boston NHP, Rehabilitate Building 125	016321	1,187	0.20	0.01
Frederick Law Olmsted NHS, Upgrade Life/Safety Systems and Rehabilitate Historic Structure	060012	2,011	0.27	0.00
Fort Larned NHS, Correct Structural Problems in Old Commissary	027384	869	0.27	0.00
Fort Larned NHS, Stabilize and Restore North Officer's Quarters	077446	1,114	0.19	0.00
San Francisco Maritime NHP, Repair Historic Sala Burton Maritime Museum Building	005585	4,182	0.15	0.02
Yellowstone NP, Restoration of Old House at Old Faithful Inn	009124	9,801	0.27	0.14

Servicewide Developmental Advisory Board: In 1995, a Department of the Interior task force completed a report entitled "Opportunity for Improvement of the National Park Service Line Item Construction Program: Definition, Control and Priority Setting." Since that time several actions have been taken to improve program management, direction, and to establish a comprehensive system of

accountability and costs controls. The Service created a Servicewide Developmental Advisory Board to ensure that the objectives of the Servicewide development strategy are being met.

In FY 2000, the Service implemented guidelines for developing Capital Asset Plans (CAP) for major line item construction projects. Information in the CAP is used to track the performance of projects against the approved baselines and Servicewide goals. Projects failing to meet quarterly baseline goals are identified and appropriate steps are implemented to improve project performance.

In FY 2002, the National Academy of Public Administration (NAPA) completed a follow-up independent review of the National Park Service implementation of the 1998 NAPA recommendations to improve Construction Activities. The NAPA report concluded that the National Park Service had fully implemented nine of the Academy's recommendations and made substantial progress on the two remaining recommendations.

In FY 2003, the Service completed prototype development of several facility models including maintenance facilities and visitor centers. The models will provide the Service with guidelines for acceptable building sizing, site development and costs of these facilities. The Service also evaluated the effectiveness and role of the Development Advisory Board. The membership of the Board was restructured and its role expanded as the Service's Investment Review Board to ensure construction investments adhere to sound business practices.

5-Year Deferred Maintenance and Capital Improvement Plan: The National Park Service has developed a comprehensive plan to identify projects of the greatest need in priority order, with special focus on critical health and safety and critical resource protection. Limited changes to the list are made annually to factor in Congressional appropriations and changing situations in the field. Examples of circumstances that could change the list are maintenance/construction emergencies from severe storm damage, descriptions of work that change as a result of condition assessments (e.g., the scraping of boards for repainting reveal extensive wood deterioration requiring complete replacement), or identification of a failing sewer system. The Service is also placing greater emphasis on developing projects to improve structural fire protection and incorporating these projects into the 5-Year Deferred Maintenance and Capital Improvement Plan. The full five year plan is provided in this submission.

All eligible NPS line item construction projects are scored according to the Department of the Interior priority system that gives the highest scores, and paramount consideration for funding, to those projects that will correct critical heath and safety problems, especially if the project involves the repair of a facility for which corrective maintenance had been deferred. The following are the weighted ranking criteria, in priority order: Critical Health and Safety Deferred Maintenance need, Critical Health and Safety Capital Improvement need, Critical Resource Protection Deferred Maintenance need, Critical Resource Protection Capital Improvement need, Critical Mission Deferred Maintenance need, Compliance and Other Deferred Maintenance need and Other Capital Improvement need. These scores, and the criteria against which they are rated, are shown on the justification for each line time construction project.

Based on the weighting factors accompanying each category listed above, projects are scored with a weighted score not to exceed 1000. Then these rankings are banded into the following categories: 800-1000 points; 500-800 points; and 0-500 points. Urgent life safety/deferred maintenance projects are included in the highest band. The NPS also uses a comparative factor analysis to evaluate projects within each band. This process assists in determining the priorities and phasing of projects within each band.

Recent Construction Program Management Improvement Initiatives: In an effort to continually refine and improve the Service's construction program and practices, the NPS has implemented the June 1998 recommendations of the National Academy of Public Administration (NAPA). Examples of completed recommendations include:

- Creation of a central oversight office to monitor design and construction activities.
- Base funding of the Denver Service Center.
- Appointment of external advisors to review construction projects.

- Institutionalizing design cost caps.
- Training programs in the design process and construction procedures for superintendents and key park staff**.**
- Making cost-effective construction part of a superintendent's performance evaluation.
- Annual monitoring of design and construction costs.
- Development of facility standards and guidelines.

In addition to the NAPA recommendations, in FY 2001-03, the Service completed initial work on four special initiatives to improve the Service's construction program performance.

1. Improved cost engineering and cost estimating. The Service has initiated a review of its cost engineering/estimating capabilities and has developed new cost guidelines for some facilities based on industry and agency standards. Additional cost modeling will continue in FY2005.
2. Facility planning criteria. Data collection, field investigations, evaluations, and reviews of other government and private guidelines is complete for all major Service building types. The Service completed model development for maintenance facilities and visitor centers. The models are available to parks, regions and central engineering offices via the intranet. Other facility models will be made available in FY2004.
3. Web-based project tracking system. The Service implemented a web based tracking system to set and monitor standardized design development milestones. The tracking system allows all levels of management within the Service to check and monitor individual project progress against a preset list of design and construction milestones.
4. Application of Facility Management Program. The Service has completed initial implementation for the Facility Management Program. Each inventoried asset is assigned a Facility Condition Index (FCI). In FY2003 initial linkages were developed between construction projects and maintenance deficiencies to evaluate FCI conditions before and after construction.

Servicewide Development Advisory Board: The Servicewide Development Advisory Board (DAB), created in March 1998, ensures that Servicewide development strategies are met in a sustainable and cost-efficient context. The DAB consists of four Associate Directors, three Regional Directors, two park superintendents, and is supported by professional staff. Associated with, and participating in, all DAB meetings are five non-NPS Advisors who bring an external prospective to the process. Projects reviewed by the Development Advisory Board include: line item construction projects; large recreation fee demonstration projects; road improvement projects involving realignment, new construction or extensive reconstruction, partnership projects including major Concessioner developments inside parks; and unique construction activities.

The DAB holds meetings throughout the year. Projects presented are reviewed for technical requirements, sustainability, value-based decision making, and policy guidelines. The DAB reviews have resulted in extensive use of value analysis in the early planning/design phases of all projects. The application of value analysis principles has resulted in significant cost avoidance and improved benefits reducing individual project costs as they proceed through the design process.

The FY 2005 National Park Service Line Item Construction request represents a $0.1 million reduction from the program for FY 2004. The line item construction program continues to be a major part of the President's initiative to reduce Servicewide backlogged infrastructure needs. The FY2005 Line Item Construction and Maintenance Projects list consists of 56 projects in 46 National Park System areas. These projects are listed alphabetically by park on the following chart, the *FY2005 Comprehensive Construction Table*. Following the individual *Project Data Sheets* is the *5-Year Maintenance and Capital Improvement Plan*.